PATENT COOPERATION TREATY

PCT

TRANSLATION INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2781–10PCT–1	FOR FURTHER ACTION	See Form P	CT/IPEA/416				
International application No. PCT/DE2004/002685	International filing date (day/m) 07.12.2004	• •	e (day/month/year) 2.2003				
International Patent Classification (IPC) or national classification and IPC B01D53/70, B01D53/81, F23G7/06, F28D17/00							
Applicant CLAUSTHALER UMWELTTECHNIKINSTITUT GMBH (CUTEC-INSTITUT)							
1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.							
2. This REPORT consists of a total of	6	sheets, including this cover sh	neet.				
3. This report is also accompanied by Al	NNEXES, comprising:						
a. (sent to the applicant and	to the International Bureau) a to	otal of 5	sheets, as follows:				
sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).							
			an amendment that goes beyond Box No. I and the Supplemental				
	Bureau only) a total of (indicate	type and number of electronic	carrier(s))				
		, containin	g a sequence listing and/or tables				
related thereto, in computer Section 802 of the Administr	•	ed in the Supplemental Box F	Relating to Sequence Listing (see				
This report contains indications relation	ng to the following items:						
Box No. I Basis of the							
Box No. II Priority	•						
Box No. III Non-establis	shment of opinion with regard to	novelty, inventive step and i	ndustrial applicability				
Box No. IV Lack of unit	y of invention						
DOATIO. V							
Box No. VI Certain docu	ments cited						
Box No. VII Certain defe	cts in the international application	on					
Box No. VIII Certain observations on the international application							
Date of submission of the demand	Date of o	completion of this report					
Name and mailing address of the IPEA/EP		ed officer					
Facsimile No	Telepho	ne No					

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
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Box	No. I	Basis of the report		
1.		h regard to the language, this report is based on the internatio cated under this item.	nal application in the language in	which it was filed, unless otherwise
		This report is based on translations from the original langua which is the language of a translation furnished for the purp international search (Rule 12.3 and 23.1(b)) publication of the international application (Rule 12.4	oses of:	·
		international preliminary examination (Rule 55.2 and		
2.	rece	h regard to the elements of the international application, this evining Office in response to an invitation under Article 14 ar report): the international application as originally filed/furnished the description:	report is based on (replacement s	
		pages 1,2,5-12		as originally filed/furnished
		pages* 3,4	received by this Authority on	08.10.2005 with letter
		pages*		
	\boxtimes	the claims:		
		nos.		as originally filed/furnished
		nos.*		
		nos.* 1-17		08.10.2005 with letter
		nos.**		
	\boxtimes	the drawings:		
		sheets _ 1/7-7/7		as originally filed/furnished
		sheets*	received by this Authority on	
		sheets*	received by this Authority on	
		a sequence listing and/or any related table(s) – see Supplem	ental Box Relating to Sequence L	isting.
3.		The amendments have resulted in the cancellation of:		
		the description, pages		
		the claims, nos.		
		the drawings, sheets/figs		
		the sequence listing (specify):		
		any table(s) related to sequence listing (specify):		
4.		This report has been established as if (some of) the amend they have been considered to go beyond the disclosure as fi		
		the description, pages		
		the claims, nos.		
		the drawings, sheets/figs		
		the sequence listing (specify):		
		any table(s) related to sequence listing (specify):		
*	If ite	em 4 applies, some or all of those sheets may be marked "sup	erseded."	

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement				
1.	Statement			
	Novelty (N)	Claims	1-17	YES
		Claims		NO
	Inventive step (IS)	Claims	1-17	YES
		Claims		NO
	Industrial applicability (IA)	Claims	1-17	YES
		Claims		NO

- 2. Citations and explanations (Rule 70.7)
 - The present application relates to a method and a 1.1 device for the thermal purification of a waste gas that contains organosilicon compounds. The waste gas is regeneratively preheated using a heatretaining material contained in a regenerator, said heat-retaining material being at least in part a packing material. Oxidation and waste gas purification is consequent upon said preheating process. The claimed method is characterised in that the heat-retaining packing material is withdrawn, purified and then returned to the regenerator. In this way, the adhesions formed by the oxidation of the organosilicon compounds are removed and clogging of the heat-retaining material is eliminated. The claimed device is characterised by associated structural features.
 - 1.2 Document JP-A-2002061822 (D1) is considered to be the closest prior art. The claimed subject matter differs from D1 by virtue of the features of the characterising parts of the independent claims.

 The device according to D1 comprises a combustion

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chamber equipped with a burner. By means of said burner, the temperature is kept permanently between 750°C and 810°C. In this way, the formation of amorphous clogging oxidation products is precluded and separate treatment of the heat-retaining material is therefore unnecessary.

Document US-A-3870474 (D2) discloses (see the passages cited in the search report) a regenerative thermal oxidation system for reducing nitrogen oxide emissions. The heat-retaining packing material that is in part clogged with soot and carbon is withdrawn from the regenerator and replaced with fresh or purified packing material. However, D2 contains nothing to indicate that the described system could be modified in order to treat waste gas containing organosilicon compounds.

Document US-A-4940567 (D3) discloses (see the passages cited in the search report) a regenerative catalytic reduction system for the reduction of nitrogen oxide emissions. The heat-retaining material is a catalytic packing material which circulates through the system. Ammonia is added. The deactivated catalytic particles are eliminated or purified and replaced with fresh and purified particles. As in document D2, there is nothing in D3 to indicate that the described system might be modified in order to treat a waste gas containing organosilicon compounds.

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- 1.3 Thus, the subject matter of independent claims 1 and 13 is novel over the prior art citations and not rendered obvious by said documents. The requirements of PCT Article 33(2) and (3) are satisfied. The same arguments also apply in respect of independent claim 17, in which the use of the device defined in claim 13 is claimed. Claim 17 therefore satisfies the requirements of PCT Article 33(2) and (3).
- 2. Dependent claims 2-12 and 14-16 relate to special embodiments of the subject matter of claims 1 and 13 and therefore satisfy the requirements of PCT Article 33(2) and (3).
- 3. The subject matter of all the claims is considered to be industrially applicable (PCT Article 33(4)).

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Box No. VII	Certain defects in the international application				
The following de	The following defects in the form or contents of the international application have been noted:				
1.	The closest prior art (D1 and D2) has not				
	been acknowledged in the description (PCT				
	Rule 5.1(a)(ii)).				